

Presentation to the APS Physics Policy Committee

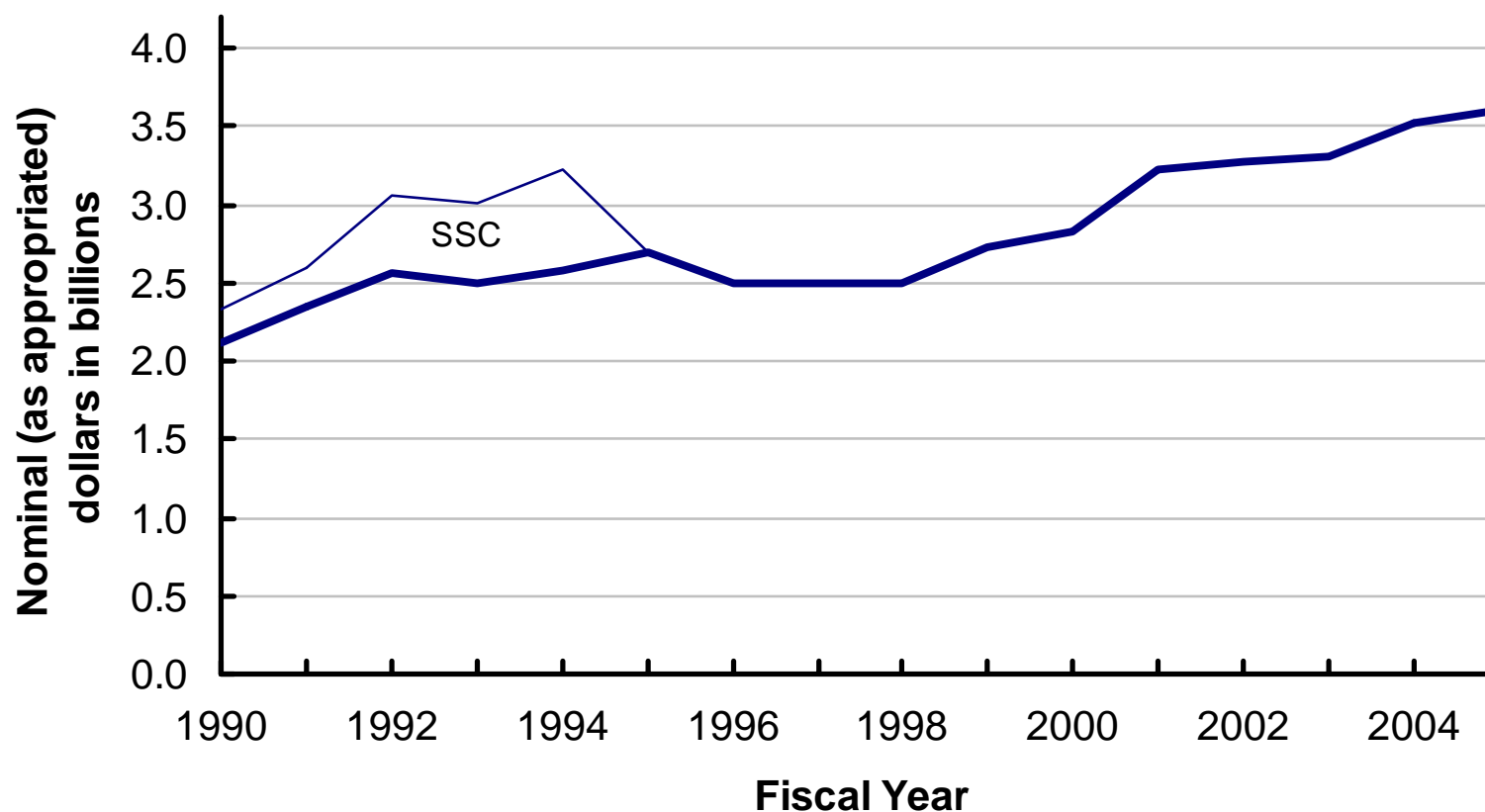
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Director
Office of Science
U.S. Department of Energy
November 30, 2004*



Funding History, FY 1990–2005

Appropriations in nominal (as appropriated) dollars



Office of Science Appropriations History







Office of Science 20-Year Facilities Outlook



Priority Near-Term

- | | | |
|----|---|---|
| 1 | FES | International Thermonuclear Experimental Reactor |
| 2 | ASCR | UltraScale Scientific Computing Capability |
| 3 | Tie for
 | HEP Joint Dark Energy Mission |
| | | BES Linac Coherent Light Source |
| | | BER Protein Production and Tags |
| | | NP Rare Isotope Accelerator |
| 7 | Tie for
 | BER Characterization & Imaging |
| | | NP Continuous Electron Beam Accelerator Facility 12GeV Upgrade |
| | | ASCR Esnet Upgrade |
| | | ASCR NERSC Upgrade |
| | | BES Transmission Electron Achromatic Microscope |
| 12 | HEP | BTeV |

Priority Mid-Term

- | | | |
|----|---|--|
| 13 | HEP | Linear Collider |
| 14 | Tie for
 | BER Cellular Systems Analysis & Modeling |
| | | BES SNS 2-4 MW Upgrade |
| | | BES SNS Target Station II |
| | | BER Whole Proteome Analysis |
| 18 | Tie for
 | NP Double Beta Decay Underground Detector |
| | | FES Next Step Spherical Tokamak |
| | | NP RHIC II |

Far-Term

- | | | |
|----|---|--|
| 21 | Tie for
 | BES National Synchrotron Light Source Upgrade |
| | | HEP Super Neutrino Beam |
| 23 | Tie for
 | BES Advanced Light Source Upgrade |
| | | BES Advanced Photon Source Upgrade |
| | | NP eRHIC |
| | | FES Fusion Energy Contingency |
| | | BES High Flux Isotope Reactor Guide Hall II |
| | | FES Integrated Beam Experiment |



Near Term Facility Status

- ITER: Negotiations ongoing regarding siting as well as legal and financial issues.
- UltraScale Scientific Computing Capability: ORNL/ANL team developing “Leadership Class” machine.
- Joint Dark Energy Mission: Instrument will be selected in peer reviewed competition sponsored by NASA and DOE. R&D continues on SNAP.
- Linac Coherent Light Source: R&D and conceptual design under way – funding for long-lead procurement in FY2005 budget.
- Protein Production and Tags Facility: R&D under way. Project engineering and design funding in FY05 budget.
- Rare Isotope Accelerator: R&D under way. Request for Proposal to be issued in December.
- Transmission Electron Achromatic Microscope: R&D and conceptual design under way.



Near Term Facility Status (Cont.)

- Characterization and Imaging Facility: Mission need approved. R&D under way.
- CEBAF 12 GeV Upgrade: R&D and conceptual design under way.
- ESNet Upgrade: First stage - core upgrade to 10 gbs - scheduled for completion in early 2005.
- NERSC Upgrade: No action. (Mission need approval not required.)
- BTeV: R&D and conceptual design under way.